**Nomination Information for the**

**Canadian Foundation for the International Space University**

**For the CASI Alouette Award**

The Alouette Award was introduced to recognize an outstanding contribution to the advancement in Canadian of space technology, applications, science or engineering. It may be awarded to an individual, to a group, an organization or group of organizations, as appropriate to the nature of the contribution.

The Award shall be conferred annually for an outstanding achievement in the field of astronautics as defined by the CASI By-Laws. The achievement may be either a single outstanding contribution or, in the case of an individual nominee, a sustained high level of performance in several advances in space. The contribution on which the nomination is based must be recognized as a Canadian-led space endeavour or a significant Canadian contribution to an international program. Preference shall be given to contributions that lead to new benefits for mankind.

**Information Pertinent to the Nomination**

In the Beginning

The Canadian Foundation for the International Space University was spawned from the founding of the International Space University (ISU) in April 1987. Three young visionaries, Peter Diamandis, Todd Hawley and Robert Richards (a Canadian) proposed a “space university” involving graduate students and teaching faculty from many different academic backgrounds, countries and cultures gathering together for a 10-wek summer “space education program” to be held in a different country each year. The purpose was to create an international cadre of space professionals, a cadre which did in fact emerge from the ISU which later became known only half-jokingly as the “Space Mafia” and which also was embraced by Canada who became the biggest student participatory group which has over the years become known as Team Canada and has provided a role model for other countries to participate in the ISU summer program.

The plan was to expose these top-flight students to a broad overview of space sciences, technologies and space law, as well as management and business concepts. Integrating these students into ‘international’ working groups and insisting that each student be fluent in at least two languages (English being mandatory), was designed to expose them to international teamwork and collaboration in space-related projects. From this experience, bonds would be formed between the students that could be utilized in the future to promote international collaborations in the peaceful exploration of space. An ideal concept for sure, but there is no doubt about the networking and collaborations that have spawned from the ISU experience over the past 25 years.

In addition, for any chance of success, the whole process required each participating country to undertake the task of student selections and find the funding necessary to cover travel to the host city and tuition. Tuition costs included student/staff housing, meals, trips and administration costs. Before Canada could even consider selection of candidates, it had to both advertise and explain this new ISU program and distribute ISU applications across Canada and around the world. Moreover, a deadline had to be set for early in the new year to provide sufficient time not only for the selection process, but to allow students enough time to make arrangements to be away for 10 weeks in June/July.

It was quickly decided by those in Canada who were part of the initial contingent from Canada who attended the ISU Founding Conference that Canada needed to create a Canadian organization that could administer the promotion of the ISU concept and the selection process across Canada. They also recognized the more daunting task of raising funds to support student travel, ISU tuition fees set at $10,000 USD per student plus administration costs. Thus was born the Canadian Foundation for the International Space University - CFISU.

CFISU Activities

A Board was quickly formed to raise funds for the first summer session. Once the Board was formed it submitted in February, 1988, CFISU’s Application for Registration as a Charitable Organization to Revenue Canada. Charitable status was approved by Revenue Canada in time for the 1988 session, allowing it to issue tax receipts.

The Board created a Student Selection Committee to work in collaboration with the Association of Universities and Colleges Canada (AUCC) located in Ottawa. AUCC provided the dissemination and collection of ISU applications, together with independent oversight of the Committee deliberations and selection process, at their headquarters. Once students were selected, final approval rested with the CFISU Board. Nominees’ applications were then forwarded to ISU who essentially provided ‘pro forma’ approval before acceptance letters were sent to the students by CFISU.

In CFISU’s first year of operation secured income of over $182K. Expenditures for this new organization, still feeling its way, however, exceeded $192K, thus putting CFISU in a deficit position of $10K for the beginning of the 1989 session. Fortunately, with the establishment of the Canadian Space Agency in 1989, they became very involved in supporting CFISU and provided sufficient funds to address both our deficit and operational costs. These costs were to increase significantly the next year due to higher tuition fees and travel expenses in order to send students to Strasbourg, France in 1989. This increase has been gradual over the years and it is now necessary to raise $30K to send one student.

One of the customs the Board implemented involved gathering all the CFISU students from across Canada several days prior to their departure for the summer program. Their travel and living costs were provided by CFISU while they met with members of the CFIUS Board and industry sponsors at a special dinner function for them. In later years we included a Canadian astronaut as a guest speaker at the dinners. During two days of excursions, they were given in-depth overviews of the Canadian space program through lectures from space professionals, and tours of space-related facilities in the manufacturing sector, or later at the Canadian Space Agency. Although the express purpose was focussed on familiarizing students with Canada’s role in space, this time period also introduced our students to each other. This experience formed bonds between them and allowed them to move forward into this intense and unknown experience with the reassuring knowledge they could call on these newfound friends for help and advice if needed. In some years, T-shirts were distributed to the students announcing them as the Canadian contingent from CFISU, a unique feature of our program. Thus was born the Team Canada concept that has endured to this day.

ISU was a summer program, with no degree-granting status. A curriculum was established for the program. Some of the main themes of the ISU curriculum that were established included;

* human performance in space
* space law and policy
* satellite applications
* space engineering
* space resources and manufacturing
* space sciences
* business and management
* arts and architecture
* Design project (different for each year).

In this ISU’s first year of operation, CFISU sent 10 students. In all, ISU had 94 students from 20 countries that came for a nine-week program. This included ten students from Canada a statistic a proportionally high number in relation to other countries that has existed until recently.

Canadian interest grew and a formal proposal was submitted to ISU on June 30, 1989, by the Toronto-based Institute for Space and Terrestrial Science (ISTS) (Now absorbed into the Ontario Centres of Excellence) on behalf of CFISU. Collaborating partners included York University, the University of Toronto Institute for Aerospace Studies (UTIAS), and the Centre for Research in Air and Space Law located at Montreal’s McGill University. As a result of this application the third ISU summer program was held in Toronto in 1990.

Prior to the 1990 summer session, the fledgling Canadian Alumni of the ISU (CAISU) was incorporated in April including members from the very first year of Canadian ISU students. Its first Board of Directors was elected during the summer session in Toronto. This successful organization, partly funded by CFISU, has provided extensive networking between alumni and their ISU colleagues around the world. CAISU has also been very active in promoting the ISU program. Many of its members assumed leadership positions during their time at the ISU summer sessions, and in some cases, have gone on to become faculty at ISU.

The Permanent Campus

By 1991, ISU had come to the realization that they needed a permanent campus to house the organization, and provide an opportunity to offer a Masters of Space Science degree. The summer program would maintain its current format of moving to a different city for the 10 week program. In April of that year the Chair of the ISU Board, formally announced on behalf of the ISU Board of Directors a competition for bids from different countries to host the site of the ISU permanent campus. Some Board members of CFISU suggested that Toronto should submit a bid, while other members noted that Montreal also had an interest in submitting a bid. Thus began a competition between these two Canadian cities, as well as with the competitors from other countries. Initially, this posed a potential conflict within the CFISU Board. However, we all quickly realized that CFISU represented ISU within Canada, and it was necessary for the Board to maintain a neutral position with no special alliance to any one region.

Certain parties determined that the Province of Ontario should prepare a bid and the provincial government was approached. The Ontario Ministry of Industry, Trade and Technology assumed a leadership role and on September 30, 1992 it was announced that:

*“The province of Ontario is submitting a bid to become the permanent site of the ISU. The bid is being put forward by the Institute of Space and Terrestrial Science, one of the province’s Centres of Excellence, supported by the Ministry of Industry, Trade and Technology. The bid will provide that a permanent central campus of ISU could be established as an affiliate of either York University or the University of Toronto”.*

On January 31, 1993, John McLucas informed Ontario that Strasbourg had been chosen as the winning site, with the formal public announcement made February 1, 1993.

The Intervening Years

 Undaunted by not being awarded the permanent campus the CFISU has continued to develop and raise funds to send students to the ISU summer sessions. This support has included the Summer Session held in Vancouver in 2005 and now Montreal in 2014. The CFISU has sponsored over 250 students to attend the ISU Summer sessions. Approximately 150 other Canadian students have found the means to attend the summer sessions. As well, Canadians have attended the ISU Master Program and are now receiving degrees.

**Canadian Sponsorship**

 No one entity has maintained sponsorship for the full 25 years of the CFISU existence but there are some who stand out. Long term organizations who have sponsored scholarships for over 20 years have been the Ontario Centres of Excellence, The Canadian Space Agency, MDA and ComDev. Other agencies that have provided many years of sponsorship include NSERC, CIAR and SSHRC. Companies with a record of sponsorship include Neptec, Bristol/Magellan, Telsat and many have sponsored on and off over the years.

 As a volunteer organization the CFISU has had to use its network of connections to raise the required funds and has often had to adjust on a year to year basis the number of students it can assist. The main point is that for 25 years the CFISU has been able to send Canadian students to the ISU Summer Program.

**The Benefit to Canada**

What CFISU has done is to develop a cadre of students well versed in space technology and well networked with each other and internationally that has now formed the backbone of the space community that is taking Canada into the 21st century as leaders in space and aerospace. This is a cross disciplinary community that includes but is not limited to science, engineering, remote sensing, law, medicine, academia and journalism. It is this group that heightens space awareness in Canada. This group that is now rising to middle management and higher positions in industry and government. The group will guide space endeavours in Canada in the future.

**The outstanding benefit provided by the CFISU has been the creation of the cadre of highly qualified people to lead Canada’s space industry.**